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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,578	03/29/2001	Vincent Vaccarelli	LEAP:101_US_	3469

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SIMPSON & SIMPSON, PLLC  
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EXAMINER
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BELL, PAUL A

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/821,578

**Applicant(s)**

VACCARELLI, VINCENT

**Examiner**

PAUL A BELL

**Art Unit**

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**– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 14-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 14-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. In view of the appeal brief filed on 1/28/2004, PROSECUTION IS HEREBY REOPENED. As set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

### ***Response to Amendment***

Note the amendments received 9/29/2003 paper # 10/C , 8/07/2003 paper # 6/B and 3/24/2003 paper #5/A have all been entered into case.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-11 and 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zirm (5,376,007) in view of Ramirex Diaz et al. (6,476,858), Glaser et al. (4,202,037) and "General Presentation, Training, and Collaborative Planning ", <http://www.boeckeler.com/poi ntmaker/slide-shows/general>, January 24, 2000, 10/22/2003 (Lets call this reference Pointmaker).

With regard to claim 1 Zirm teaches a microscopy laboratory system comprising: a plurality of student microscopes (figure 1, item 14); a plurality of cameras (figure 1, item 15) associated one with each of said plurality of student microscopes for generating an image signal representing a student view image of at least a portion of the field of view of said student microscope (column 3, lines 48-54); a control means (figure 1, items 17, 18, 25, 26 and 27) connected to said plurality of cameras for receiving said image signals and enabling an instructor to select a set of said image signals for display, wherein said control means generates an instruction image signal generated from said selected set of image signals (figure 1, item 30 and item 18 illustrates images 1-9 multiplexed onto monitor 18 from cameras at student operation stations numbered 1-8 and operating table 9 also SEE column 3, lines 51-54); and display means (figure 2, items 18 or 29 or 35) connected to said control means for receiving said instruction image signal and displaying an instruction image comprising student view images corresponding to said selected set of image signals (column 3, lines 51-54).

With regard to claim 1 ZIRM does not in the text part directly teach his "control means" ( items 17,25,26 and 27) was a "multiplexed control means" because he does not use the word "multiplexer" as is well-known, a multiplexer is, "a device for combining two or more signals" (McGraw-Hill Dictionary of Scientific and Technical Terms, 5<sup>th</sup> edition, Page 1309, 1994).

However when you look at figure 1 it shows item 17 which ZIRM calls "a Video Distributor" which has a plurality of video signals (from 9-16) going in as inputs into item

17 and especially note a signal line comes out of item 17 at the bottom and goes into the top of item 18 which illustrates images 1-9 that clearly suggest the function of being multiplexed onto monitor 18 from cameras at student operation stations numbered 1-8 and operating table 9 also SEE column 3, lines 51-54. It is clear that Zirm merely acted as his own lexicographer here when he used the phrase "a Video Distributor" instead of using the more common phrase "a video multiplexer" which more clearly defines what happening in the Zirm illustration figure 1 item 18 (also note applicant does not actually use structural language such as "multiplexer" in claim 1, he instead uses functional language such as "multiplexed" creating a more broad concept).

Ramirex Diaz et al. actually teaches the structure of "a video multiplexer" in figure 8A item 309 and column 4, lines 54-64 whereby figure 3 illustrates multiplexed video images on a display from a plurality of cameras just like ZIRM in figure 18 and applicant.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the "video multiplexer" to perform the function of multiplexing the video signals as taught by Ramirex Diaz et al. in the apparatus of ZIRM because ZIRM suggest this function in his figure 1 and further it is well-known that multiplexers obviate the need for manual operations, i.e., pushbuttons because multiplexers combine the signals automatically and further since there is only one line going to the display in ZIRM a multiplexed signal would have been required.

With still further regard to claim 1 the combination of ZIRM and Ramirex Diaz et al. does not illustrate "a display image marker connected to said multiplexed control

means for enabling said instructor to annotate said instruction image **in real time**".

Zirm instead uses nontouch displays and only illustrated the concept of "annotating said instruction image" at the conclusion of the operation (column 4, lines 20-47). The Zirm patent lacks a direct illustration of placing any type of note or figure, including pressure measurements, on any image in real time. However one must not lose sight of the fact that Zirm did demonstrate the value or coordination of a note with the image for instructional purposes, he just did not do it in real time.

Glasser et al. teaches in figure 1 a separate graphics display item 19 and a means of interfacing with the graphics display by means of a graphics tablet item 21 and "display image marker" 22 and Glasser et al. also teaches in figures 4a-c and 6 and column 4, lines 43-57 "annotating said instruction image in real time".

Pointmaker teaches a display means being, "a touch screen display means", (SEE Pointmaker page 14 title Controllers "Touch Screen") just like the applicants which is just viewed as a simple integration of the graphics tablet and display of Glaser et al. Pointmaker like Glasser et al. also teaches "annotating said instruction image in real time" and further Pointmaker gives much motivation for using its software and touch screen (SEE Pointmaker pages 2-4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the "touch screen" as taught by Pointmaker in the apparatus of Zirm because Glasser et al. illustrated that it was a well-known practice in the prior art to use a pointing device such as a "image display marker" to control and annotate the image provided by a microscope. Also since Zirm illustrates a PC (See Zirm figure 2,

item 35 Personal Computer) it does suggest the use of a pointing device such as a "image display marker". Also the use of a touch screen with a "image display marker" creates more space on your desk since a mouse is not needed, which is desirable and therefore motivational and further Glasser et al. shows a student teaching concept much like Zirm and applicant.

With regard to claim 2 the combination of Zirm/Ramirez Diaz et al./Glaser et al./Pointmaker teaches a microscope laboratory system according to claim 1, further comprising an instructor microscope and a camera (SEE Zirm figure 2, items 14, 15, and 36) for generating an image signal (SEE Zirm figure 2, item 24) representing an instructor view image of at least a portion of the field of view of said instructor microscope, wherein said multiplexed control means is connected to said camera (SEE Zirm figure 2, item 24) associated with said instructor microscope to receive said image signal generated thereby, whereby said instruction image optionally comprises said instructor view image (SEE Zirm column 4, lines 15-20).

With regard to claim 3 the combination of Zirm/Ramirez Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 1, wherein said multiplexed control means allows said instructor to select all of said image signals from said cameras associated with said plurality of student microscopes as said selected set (SEE Zirm column 4, lines 15-20).

With regard to claim 4 the combination of Zirm/Ramirez Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 2, wherein said multiplexed control means allows said instructor to select all of said image signals

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from said cameras associated with said plurality of student microscopes as said selected set (SEE Zirm column 4, lines 15-20).

With regard to claim 5 the combination of Zirm/Ramirex Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 1, wherein said multiplexed control means allows said instructor to select said image signal from said camera associated with any one of said plurality of student microscopes as said selected set (SEE Zirm column 4, lines 15-20).

With regard to claim 6 the combination of Zirm/Ramirex Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 2, wherein said multiplexed control means allows said instructor to select said image signal from said camera associated with any one of said plurality of student microscopes as said selected set (SEE Zirm column 4, lines 15-20).

With regard to claim 7 the combination of Zirm/Ramirex Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 1, wherein said multiplexed control means allows said instructor to select said image signals from cameras of a predetermined sub-group of said plurality of student microscopes as said selected set (SEE Zirm column 4, lines 15-20 and column 3, lines 47-54).

With regard to claim 8 the combination of Zirm/Ramirex Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 2, wherein said multiplexed control means allows said instructor to select said image signals from cameras of a 15 predetermined sub-group of said plurality of student microscopes as said selected set (SEE Zirm column 4, lines 15-20 and column 3, lines 47-54).



With regard to claim 9 the combination of Zirm/Ramirex Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 7, wherein there is a plurality of different predetermined sub-groups of said student microscopes (SEE Zirm column 4, lines 15-20 and column 3, lines 47-54).

With regard to claim 10 the combination of Zirm/Ramirex Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 8, wherein there is a plurality of different predetermined sub-groups of said student microscopes (SEE Zirm column 4, lines 15-20 and column 3, lines 47-54).

With regard to claim 11 the combination of Zirm/Ramirex Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 2, wherein said multiplexed control means allows said instructor to select said image signal from said camera associated with said instructor microscope as said selected set (SEE Zirm column 4, lines 15-20 and column 3, lines 47-54).

With regard to claim 14 the combination of Zirm/Ramirex Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 1, further comprising a computer connected to said multiplexed control means, said computer having a memory, whereby said instruction image and said student view images can be stored in and retrieved from said memory (SEE Zirm figure 2, item 35).

With regard to claim 15 the combination of Zirm/Ramirex Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 2, further comprising a computer connected to said multiplexed control means, said computer having a memory, whereby said instruction image, said student view images, and said

instructor view image can be stored in and retrieved from said memory (SEE Zirm figure 2, item 35).

With regard to claim 16 the combination of Zirm/Ramirex Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 1, wherein said multiplexed control means comprises means for selectively superimposing respective identification information on each said student view image in said instruction image (SEE Zirm column 4, lines 42-46).

With regard to claim 17 the combination of Zirm/Ramirex Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 2, wherein said multiplexed control means comprises means for selectively superimposing respective identification information on each said student view image in said instruction image (SEE Zirm column 4, lines 42-46).

With regard to claim 18 the combination of Zirm/Ramirex Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 1, wherein said multiplexed control means comprises means for magnifying said instruction image (SEE Zirm figure 1, item 30).

With regard to claim 19 the combination of Zirm/Ramirex Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 2, wherein said multiplexed control means comprises means for magnifying said instruction image (SEE Zirm figure 2, item 30).

With regard to claim 20 the combination of Zirm/Ramirex Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 1, wherein

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said connection between said multiplexed control means and said plurality of cameras comprises a wireless connection (SEE Zirm column 3, lines 1-15).

With regard to claim 21 the combination of Zirm/Ramirex Diaz et al./Glaser et al./Pointmaker teaches the microscopy laboratory system according to claim 1, wherein said connection between said display means and said multiplexed control means comprises a wireless connection (SEE Zirm column 3, lines 1-15).

*Response to Arguments*

4. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

**Conclusion**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Bell whose telephone number is (703) 306-3019.

If attempts to reach the examiner by telephone are unsuccessful the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377 can help with any inquiry of a general nature or relating to the status of this application.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231


Or Faxed to: (703) 872-9306

Or Hand-delivered to: Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor  
(Receptionist).

  
Paul Bell

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April 23, 2004

  
CHANH NGUYEN  
PRIMARY EXAMINER